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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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SUGHRUE MION, PLLC				
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SUITE 800				
WASHINGTON, DC 20037				
EXAMINER				
SHEARER, DANIEL R				
ART UNIT		PAPER NUMBER		
3754				
NOTIFICATION DATE		DELIVERY MODE		
08/11/2011		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/559,381

Applicant(s)

BARRANCO ET AL.

Examiner

DANIEL R. SHEARER

Art Unit

3754

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 June 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 12-14 and 16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 12-14 and 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-940)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Warning

1. Applicant is advised that should claim 1 be found allowable, claim 16 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof.

When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1-5, 8, 12 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,836,299 to Kwon in view of U.S. Patent No. 5,565,275 to Schmidt et al. (Schmidt).

Kwon shows an aerosol dispenser for dispensing a fluid product (see abstract), comprising a reservoir (30) containing a fluid product and a propellant gas in the form of HFC-134a gas (Col. 6, ll. 8-11), a valve (12) mounted on the reservoir and a valve seal (16) made of a one piece integral structure without a rigid insert (Col. 4, ll. 66-67 and Col. 5, ll. 1-2) consisting of EPDM (see abstract) and an unknown additive such as silica (Col. 3, ll. 44-52). Kwon shows a valve element (12) sliding in a valve body with the interposition of the valve seal. Kwon fails to disclose the seal including mineral filler based upon quartz and kaolinite.

Art Unit: 3754

Schmidt discloses a material comprised of EPDM and a mineral filler sillitin (Col. 8, example table) for use in seals (Col. 8, line 23) that results in excellent slide friction properties (Col. 8, line 12). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have manufactured the valve seal of Kwon with mineral filler of Schmidt since Schmidt discloses that the resulting material possesses excellent slide friction properties. Further, it has been held that the selection of a known material based on its suitability for its intended use can support a conclusion of prima facie obviousness. (See MPEP 2144.06). Even further, in Column 3, ll. 34-52 Kwon invites one of ordinary skill in the art to select an additive such as silica for the EPDM. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected the additive Sillitin, disclosed as a well known silicate additive by Schmidt, for the valve seal of Kwon.

Regarding claims 2-5, the mineral filler Sillitin includes a mineralogical composition of between 65% and 95% of quartz and between 5% and 35% of kaolinite, a chemical composition of between 3% and 15% of Alumina and between 75% and 95% of Silica, a pH greater than 6 and an average particle size between 1.5 and 4 microns (See NPL, material data sheet for Z86).

Regarding claim 12, Kwon discloses that the reservoir contains ethanol (table in Col. 7).

Art Unit: 3754

4. Claims 6 and 13 rejected under 35 U.S.C. 103(a) as being unpatentable over Kwon in view of Schmidt and U.S. Patent No. 5,085,005 to Yasukawa et al. (Yasukawa).

The Kwon-Schmidt combination shows all aspects of the applicant's invention as set forth in claim 1, but fails to disclose that the seal is subjected to a surface chlorination treatment. Yasukawa shows a seal (48) formed of diene rubber that is subjected to a chlorination treatment to reduce the sliding resistance of the seal (Col. 5, ll. 64-67 and Col. 5, ll. 1-6). Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to have subjected the seal of Kwon as modified by Schmidt to a chlorination treatment as taught by Yasukawa to reduce the sliding resistance of the seal.

Regarding claim 13, the claimed manufacturing process is inherently disclosed by the structure of Kwon as modified by Schmidt and Yasukawa as applied to claims 1 and 6 above.

5. Claims 7 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson in view of Kwon and Yasukawa as applied to claims 6 and 13 above, and further in view of U.S. Patent No. 6,306,514 to Weikel et al. (Weikel).

Kwon as modified by Schmidt and Yasukawa shows all aspects of applicant's invention as set forth in claims 6 and 13 but fails to specifically disclose the surface chlorination treatment comprising a solution of water,

Art Unit: 3754

hydrochloric acid and bleach. However, Weikel discloses that a surface chlorination treatment comprising a solution of water, hydrochloric acid and bleach is a known process to change the characteristics of rubber (Col. 1, ll. 50-59). It would have been obvious to one of ordinary skill in the art to have subjected the material of Kwon as modified by Schmidt with the treatment as taught by Weikel to achieve the desired characteristics for the material.

Response to Arguments

6. Applicant's arguments filed 9/20/2010 have been fully considered but they are not persuasive. Applicant argues that the Kwon-Schmidt combination would not have been obvious since neither reference discloses the use of Sillitin in contact with HFC propellants. This argument is not persuasive because Schmidt discloses that the use of EPDM with Sillitin results in excellent slide friction qualities. Therefore, Schmidt provides an alternate motivation to combine with Kwon. Furthermore, Kwon invites one of ordinary skill in the art to select an additive for EPDM and lists silicas as an option (Col. 3, ll. 34-52, Sillitin is a silica). Therefore it would have been obvious to one having ordinary skill in the art at the time the invention to try the known silica additive Sillitin with EPDM for the valve seal as invited by the disclosure of Kwon and shown by Schmidt to be possible.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL R. SHEARER whose telephone number is (571)270-7416. The examiner can normally be reached on Monday through Friday 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Shaver can be reached on (571)272-4720. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3754

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. R. S./
Examiner, Art Unit 3754

/KEVIN P. SHAVER/
Supervisory Patent Examiner, Art
Unit 3754